

# **Camp Lick Project**

## **Range Report**



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**For:**  
Blue Mountain Ranger District  
Malheur National Forest

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## Introduction

This report provides basic rangeland resource information within the planning area. Discussion regarding the planning area is focused on the grazing allotments and their respective pastures for the purpose of addressing grazing permit administrative impacts or impacts to permittees.

Within the planning area there are seven grazing allotments: Long Creek, Slide Creek, Round Top, Camp Creek, Dixie, Lower Middle Fork, and Balance (Table 1). Currently all seven allotments within the planning area have 10-year term grazing permits (Table 2).

**Table 1. Allotments in the Camp Lick planning area**

Allotment	Total acres	Acres within planning area	Percentage of allotment within planning area
Long Creek	49,640	33,450	68%
Slide Creek	25,260	2,850	11%
Round Top	13,470	250	2%
Camp Creek	610	340	56%
Dixie	26,870	750	3%
Lower Middle Fork	55,060	960	2%
Balance	150	40	25%

**Table 2. Allotment livestock grazing numbers, animal unit months, and permitted dates of use**

Allotment	Livestock numbers (cow/calf pairs)	Animal unit months <sup>1</sup>	On date	Off date
Long Creek	967	3,246	1-Jun	15-Oct
Slide Creek	777	4,282	1-Jun	15-Oct
Round Top	200	1,059	1-Jun	30-Sep
Camp Creek	50	330	1-Jun	30-Oct
Dixie	173	1,028	1-Jun	15-Oct
Lower Middle Fork	549	3,645	1-Jun	31-Oct
Balance	9	59	1-Jun	30-Oct

The allotments within the planning area contain diverse ecosystems, including south facing slopes with grassland type environments that contain moderate amounts of Idaho fescue and bluebunch wheatgrass with a ponderosa pine/Douglas-fir overstory and meadow environments that were historically agricultural private land and/or used extensively by Civilian Conservation Corps crews during the 1930s to 1940s for the conservation and development of natural resources. Additionally, within these allotments there are upland Cool Moist plant associations comprising limited amounts of forage dominated by forbs and shrubs, and riparian ecosystems that are composed of sedges and rushes with an alder, willow, and dogwood dominant canopy.

<sup>1</sup> Animal unit month (AUM): The amount of forage required by one mature (1,000 pound) cow or its equivalent for 1 month (based upon average forage consumption of 26 pounds of dry matter per day).

## Regulatory Framework

The authority to protect, manage, and administer National Forest System lands and other lands under Forest Service administration for range management purposes is found in the following two acts:

- Multiple Use Sustained Yield Act (1960) established the policy and purpose of national forests to provide for multiple uses and sustained yield of products and services.
- Forest and Range Renewable Resources Planning Act (1974) established public land policy and guidelines for management, protection, development, and enhancement of public lands.

The Malheur Forest Plan, as amended, provides general direction, objectives, and goals for the management of forest resources (USDA Forest Service 1990, page IV–2) including:

- Provide a sustained production of palatable forage for grazing by livestock and dependent wildlife species (Forest goal 20).
- Manage rangelands to meet the needs of other resources and uses at a level that is responsive to site-specific objectives (Forest goal 21).
- Permit livestock use on suitable range when the permittee manages livestock using prescribed practices (Forest goal 22).

The Malheur National Forest Post Fire Grazing Interim Guidelines (USDA Forest Service 2003) is an interim guide providing direction that establishes minimum timeframes an area would be rested from grazing following a wildfire or prescribed fire.

## Resource Elements, Indicators and Measures

The resource indicators detailed in Table 3, and described in the existing condition, are used for assessing the effects to rangeland resources in the Camp Lick planning area.

**Table 3. Resource indicators and measures for assessing effects**

Indicator	Resource Indicator	Measure	Justification
Upland water sources	Availability of water developments to increase cattle distribution in the uplands	Number and maintenance level of water developments	USDA Forest Service 1990
Forage production	Assess changes to forage production	Available forage	USDA Forest Service 1990
Acres available for livestock grazing	Assess changes to acres available for livestock grazing	Available acres for livestock grazing	USDA Forest Service 1990

## Affected Environment

### Existing Condition

Livestock grazing within the planning area has been essential to meet European-American settlers' needs since before the Forest Service was formed in 1905. In the early 1900s, individuals or families living near Forest boundaries could obtain free use permits to graze up to 10 animals on Forest Service land during a specified time of year. If they purchased a permit, they could graze larger numbers of livestock, confined to a specific "allotment," and if adhering to specific

guidelines on where to place their salt blocks. In the early 1900s, the Forest Service limited the number of livestock grazing on government land by instituting the current permit system. In subsequent years it began fencing allotment boundaries and developing upland water sources to keep permitted livestock in specified locations, and to keep non-permitted cattle off of government land.

During the mid-1900s, priority was placed on rangeland restoration activities, including seeding, erosion control, and the development of cross fencing. Cross-fencing was designed to control where livestock were at certain times during the grazing season, which led to the development of intensive grazing strategies. Intensive grazing strategies utilized on this forest include but are not limited to: deferred rotation, rest rotation, rest-deferred rotation, and flash grazing. Each of these are used on at a minimum of one of the allotments throughout the district. Throughout the early to mid-1900s, permitted livestock numbers decreased. Permits temporarily increased during World War I and World War II, but were reduced to pre-war numbers after World War II. Livestock numbers have steadily decreased since World War II. During the late 1900s, active management trends continued, with increased fencing and the development of deferred and rest rotations. “Best available science” has been used to guide current and future allotment management decisions.

During the past 20 to 30 years, emphasis was placed on riparian habitat and stream health, largely in response to the Endangered Species Act and the listing of key anadromous fish species. As a result, management-intensive grazing strategies have been developed and are continually adapted to maintain or improve riparian habitat. There has also been an increase in the amount of monitoring conducted on riparian systems to foster a clearer understanding of grazing effects.

Habitat trends indicate that within managed sites significant positive trends were found in six of the eight attributes. These attributes include: bank stability, D50 (median particle size), decrease in percent fine sediment, increase in residual pool depth, increase in large woody debris frequency, and increase in large woody debris volume. Although no significant change in the overhanging banks was observed in the managed sites, no significant change in overhanging banks were observed in the reference sites either. A significant decrease in percent of reaches as pools were observed in both reference and managed sites throughout the survey (Archer et al. 2009). Although there are still areas of concern, riparian habitat continues to improve with the continued presence of livestock.

Forage availability within most of the planning area has decreased due to fire suppression and lack of recent timber harvest. The result is an increase in canopy structure, which reduces the amount of sunlight reaching the forest floor and thus the amount of available forage.

Prior to European-American settlement of the area, fire played a dominant role in shaping the landscape. Forest Service fire suppression policies have altered the ecosystem. Many historically open ponderosa pine stands have been encroached upon by other species and provide less in the way of forage for grazing animals. Conifers have encroached upon areas that were once open meadows and dry rangeland. Densely-populated stands are reduced in vigor because of overcrowding, or have already succumbed to insects and disease. In areas with high tree mortality, fallen trees restrict movement of wild ungulates and livestock, thereby further limiting the amount of forage available.

Native grass and forb species are still predominant in many areas of the dry forest type; however, in some areas, non-native species were introduced to stabilize soils along roads, skid trails, and landing sites (i.e., intermediate wheatgrass, orchard grass, Timothy grass, yellow sweet clover,

black medic, bird's foot trefoil, and Kentucky bluegrass). Some of these same disturbed locations now host populations of non-native invasive plant species.

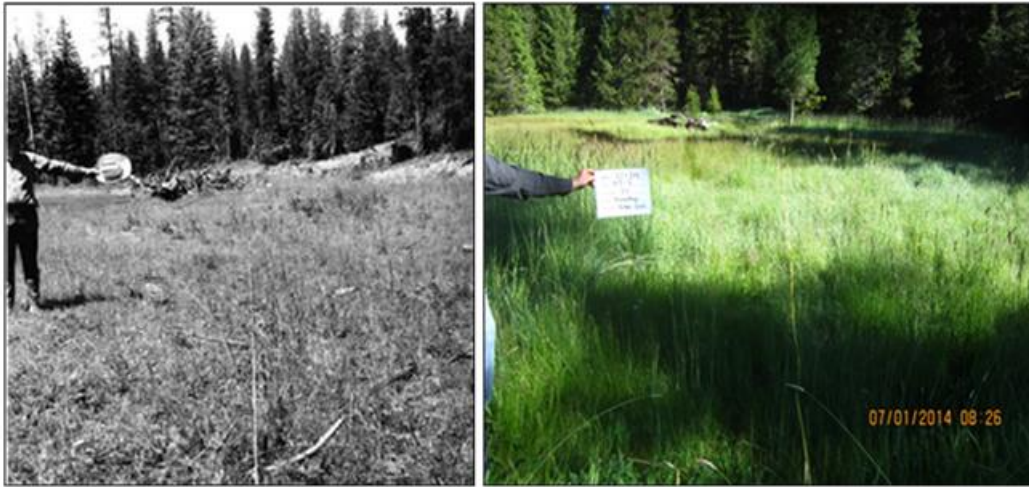
### Riparian Conditions within the Planning Area

Within the Camp Lick planning area, the Forest Service interdisciplinary team annually collects riparian monitoring data on the amount of utilization by permitted livestock. At regular intervals, the PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program collects stream condition data relating to livestock use levels. This data indicates that livestock use of riparian areas has been within allowable levels for several years. As a result, the riparian areas have been able to recover from their historically poor condition.

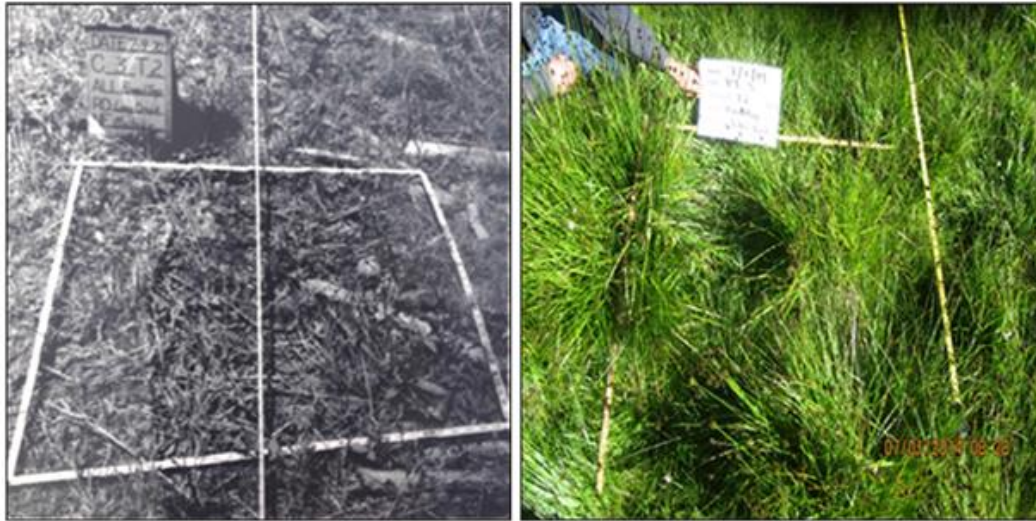
### Upland Conditions within the Planning Area

In 1970, condition and trend monitoring of plant communities within the planning area was completed. The results of this monitoring indicated that the condition of the vegetative community was “poor.”

Throughout the planning area, upland utilization monitoring is collected annually using the landscape appearance method. One plot is collected in each pasture of each allotment. As directed by the current biological opinion, upland standards for these allotments are set at 45 percent utilization threshold using the landscape appearance. Throughout the past 4 years, the Forest Service has been successful in meeting the upland use standard.



**Figure 1. Vegetation condition was “poor” in 1970 (left photo) compared to a “good-excellent” vegetation condition in 2014 (right photo) (photos are representative of general trend throughout the planning area)**



**Figure 2. Vegetation condition was “poor” in 1970 (left photo) compared to a “good-excellent” vegetation condition in 2014 (right photo) (photos are representative of general trend throughout planning area)**

### Upland Water Developments

Throughout each allotment, a number of structural improvements are maintained by the permittees. These improvements include allotment boundary and pasture fences, small enclosure fences, watering troughs, and ponds. Fences on the allotments are maintained annually and troughs and ponds are maintained on an as needed basis, typically once every 5 years.

There are currently 63 upland water developments within the planning area with varying levels of functional life remaining, including: 31 ponds, 28 water troughs, and 4 trough/pond combinations.

### Desired Condition

The lands within the planning area are managed to achieve desired conditions as described in the Malheur Forest Plan and to maintain a healthy, diverse, resilient ecosystem. The Forest Plan desired conditions include providing a sustained production of palatable forage for grazing by livestock and dependent wildlife species, managing rangelands to meet the needs of other resources and uses at a level that is responsible to site-specific objections, and permitting livestock use on suitable range when the permittee manages livestock using prescribed practices (USDA Forest Service 1990, page IV–2). The desired conditions include quality land management under the sustainable multiple-use management concept to meet the diverse needs of people. Desired conditions directly related to resource indicators include the development and maintenance of upland water sources for use by wildlife and livestock. Vegetation management that yields vigorous, diverse, sustainable ecosystems. Through the vegetation management practices our resource indicator regarding acres available for grazing will be met.

### Environmental Consequences

#### Methodology

Effects analysis in this report is focused on the grazing allotments and their respective pastures for the purpose of addressing grazing permit administrative impacts or impacts to permittees.



Annual range vegetation monitoring has been conducted on the grazing allotments located within the planning area using the landscape appearance method. Range administration is conducted yearly by both the Forest Service range program and the permittees to meet terms and conditions of the grazing permit.

Other sources of information include:

- Grazing permits
- Malheur National Forest geographic information system (GIS) database
- Malheur Forest Plan
- On-the-ground knowledge of the planning area
- Conversations and field visits with permittees

### Spatial and Temporal Context for Effect Analysis

The spatial context for this analysis is the planning area which lies within and across, the boundaries of seven grazing allotments within the Blue Mountain Ranger District of the Malheur National Forest. Spatially, per allotment, the effects of the proposed action would exist at a scale of the landscape that is 68 percent of the Long Creek allotment, 11 percent of the Slide Creek allotment, 2 percent of the Lower Middle Fork allotment, 56 of the Camp Creek allotment, 3 percent of the Dixie allotment, 2 percent of the Roundtop allotment, 25 percent of the Balance allotment. The allotments within the project planning area are spatially static and the effects from the proposed actions are expected to occur solely within the boundaries.

The temporal context used for this analysis spans from immediately following the action to 2 years (short-term effects) and from 2-10 years after the project is implemented (long-term effects). Project disturbance is expected to span 2 years while the effects from the project will be analyzed for the following 10 years. It is expected that the effects of the project would be greatest during implementation. During the period following the project implementation it is expected that the effects from the proposed action will increase over time in comparison to the areas not proposed for treatment. These effects would be long-term and generally from the indirect effects, such as changes in sunlight, hydrologic regimes, and changes in animal grazing patterns.

### Past, Present, and Reasonably Foreseeable Future Actions Relevant to Cumulative Effects Analysis

Past actions in or near the planning area include, but are not limited to, timber management, mining, wildland fuels management, fire suppression, grazing, recreation, firewood cutting, road and facilities construction and maintenance, aquatic restoration, fencing, development of upland water sources, and improving elk and mule deer habitat and forage. All actions listed in the Camp Lick FEA Appendix E – Past, Ongoing, and Reasonably Foreseeable Activities were considered for cumulative effects.

### Design Criteria and Mitigation Measures

**Table 4. Project design criteria to be applied during implementation**

Criteria number	Objective	Design criteria	Areas, units, or activity type	Responsible Person
Range-1	Minimize impacts to allotment management	All existing structural range improvements (fences, gates, spring developments, etc.) and permanent ecological plots will be contractually	Silviculture treatments and prescribed burning	Timber sale administrator, burn boss

Criteria number	Objective	Design criteria	Areas, units, or activity type	Responsible Person
		protected. If these structural improvements are damaged during project operations they will be repaired to Forest Service standards prior to livestock scheduled use by the party responsible for causing the damage.		
Range-2	Minimize impacts to allotment management	Fence right of ways (6 feet either side of fence), trails, other developments, and access to them will be cleared of slash produced by logging or post-sale activities.	Harvest activities	Timber sale administrator
Range-3	Minimize impacts to allotment management	Actions that result in roads being closed for any period of time, even if detours are present, need to be coordinated with the Blue Mountain Ranger District (BMRD) range program to ensure adequate passage for the purpose of livestock management and activities associated with FS-2200-10: term grazing permit.	Roads accessing rangeland management areas	Timber sale administrator, transportation planner
Range-4	Minimize impacts to allotment management	Construction of fencing for the purpose of protection of a resource will be coordinated with the BMRD range program and will not result in loss of grazing land in such a manner that the contractual obligations between the Forest Service and a term grazing permit holder require modification or are no longer achievable.	Fence construction	Resource specialist responsible for installing the fencing
Range-5	Minimize impacts to allotment management	All structural improvements will be constructed in accordance with guidance from General Technical Report PNW-GTR-250 (Sanderson et al.1990) and the expertise of a Rangeland Management Specialist.	Rangeland structural improvements	Resource specialist installing the structural improvements
Range-6	Minimize impacts to allotment management	Range, fire specialist, and permittees should coordinate activities, including the scheduling of burning activities in grazing units for prescribed fire.	Prescribed burning	Rangeland specialist, burn boss
Range-7	Minimize impacts to allotment management	Use the Malheur National Forest Post-Fire Interim Grazing Guidelines to aid in determining resumption of grazing after prescribed burning is complete.	Prescribed burning	Rangeland specialist
Range-8	Minimize impacts to allotment management	Whenever possible, burn units within pastures would be burned in the spring of the year the pasture is rested, or in the fall prior to the rest year.	Prescribed burning	Rangeland specialist, burn boss
Range-9	Minimize impacts to allotment management	The permittee has the option to exclude cattle grazing from portions of a pasture that were burned (through the use of fencing) and could continue to graze unburned areas of a pasture.	Prescribed burning	Rangeland specialist, burn boss

## Alternative 1 – No Action

### Direct and Indirect Effects

With the no action alternative, current grazing practices would continue on all allotments within the planning area. The no action alternative would have no overall direct or indirect impacts to permittee operations.

Environmental consequences resulting from no action would include decreased forage availability due to increased resource competition and overstory shading caused by ongoing conifer encroachment. Decreases in forage availability would likely affect livestock distribution within the allotments. It is also expected that increases in tree density over time would decrease the available water in springs, thus increasing the difficulty of managing livestock.

Under this alternative, the existing forage base would decline in vigor, abundance, and diversity as canopy cover continues to close. Tight canopies reduce available sunlight on the forest floor, increase the duff layer, and reduce soil moisture and nutrients. Carrying capacity would decline as grasses, forbs, and shrubs are crowded out by shade-tolerant species with less forage value to livestock and wild ungulates, resulting in a reduction of available forage. If more suitable rangeland is not created by future management projects or natural disturbance, the number of livestock permitted to graze on this planning area may decrease in the future to avoid unacceptable levels of damage to ecosystems by livestock.

With the no action alternative, no ground disturbance would occur, so grasses and grass-likes<sup>2</sup> are not as likely to be infested by non-native invasive plants. Aspen stands would continue to decline, as increased competition from conifers outcompete them for nutrients, water, and sunlight. Declining resource conditions and increased canopy cover would also favor larger, high-intensity wildfires in the long-term. With more intense fire regimes, less palatable or non-native invasive plant species would likely increase. Invasive plants readily establish in high-intensity burns and prevent re-establishment of native forage.

Under the no action alternative, the existing spring developments and fence lines would require slightly more maintenance. Fence maintenance costs would increase as snag densities increase and fall into the fence right-of-way, thus needing to be removed. Increased tree density would decrease access to spring developments by the permittee in order to keep them in proper functioning condition.

With the no action alternative, no changes would be made in road densities that would impact permittee operations or access to improvements.

### Cumulative Effects

The past, present, and reasonably foreseeable future actions in the planning area include (but are not limited to): use and maintenance of Forest roads, fire suppression, livestock grazing, fence/water trough maintenance, firewood cutting, aquatic restoration activities, and year-round recreational use.

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<sup>2</sup> Grasses are from the family Poaceae. Grass-likes are the variety of plants with long, narrow leaves that sheath the stem, (like a grass). Some are hollow or have compartments with air spaces. They resemble grasses or sedges, but do not have a perigynium (female part of the flower) like sedges, or flowers arranged in spikelets as in true grasses.

Permittees within the planning area utilize the road systems daily throughout the grazing season to assist with management of their grazing allotments. As conifer encroachment continues, traversing the landscape on horseback would continue to become more difficult and dangerous.

Fire suppression since the early 1900s has increased canopy density within the planning area, consequently changing the forage composition and decreasing the acres available for grazing by wildlife and cattle. This has decreased the overall productivity of the allotment in terms of palatable herbaceous plant products. In addition, as tree density increases, springs and seeps would have decreased flow as additional water is utilized to support the increased number of trees. Also, maintenance of fencing and water troughs would increase in difficulty due to increased instances of falling trees causing damage to livestock management structures.

Public firewood cutting would not have a measureable effect on the management of the grazing allotments within the planning area because it would not negatively impact forage production.

Aquatic restoration in the short-term (1 to 2 years post-treatment) would have a negative effect on the available forage for grazing. In the long-term it would limit cattle access to sensitive stream banks and potentially increase the amount of time cattle can graze in a pasture without affecting sensitive stream banks. Thus, long-term the aquatic restoration process would have a benefit to grazing within the planning area.

Recreational use within the planning area creates challenges for livestock management as gates are often left open throughout the grazing season, increasing the complexity of livestock management actions.

## **Alternative 2 – Proposed Action**

### **Direct and Indirect Effects**

#### *Silviculture Treatments*

Silviculture treatments would positively affect range conditions by reducing conifer density in stands, reducing ground fuel loads that restrict livestock movement, and decreasing overstory cover, which would increase available forage and ease of access to water developments. Restoring meadow systems is one of the facets of the silviculture treatments that would have a benefit to the rangeland. The silviculture treatments would decrease the impacts of cattle grazing on riparian zones by providing cattle more suitable upland rangeland to use.

#### *Riparian and Upland Watershed Restoration Treatments*

The amount of aspen enclosures and the area which would be excluded from livestock use due to the enclosures is not expected to have a measurable effect on utilization rates throughout the rest of the planning area.

The ecological riparian treatments and placement of woody debris within the riparian area in an effort to collect sediment, reconnect the floodplain, increase hardwoods, and increase overall ecological processes provided by the riparian systems are likely to decrease the amount of available forage for livestock within the planning area in the short-term (1 to 2 years post-treatment). Furthermore, riparian restoration treatments that decrease the amount of available acres for livestock grazing would also have a detrimental effect to range management. These detrimental effects are expected to be short-term and balanced by thinning activities within the planning area. Thus, there is expected to be a positive effect from riparian restoration by decreasing livestock

access to stream channels, and increasing the amount of time livestock could potentially stay in a pasture without negatively impacting riparian systems. Although the potential for isolated impacts is increased, aquatic restoration actions are expected to be beneficial overall to the riparian system as well as the rangeland.

### *Prescribed Burning and Unplanned Ignitions*

Prescribed burning that consumes light herbaceous material would have a positive effect on range management. By burning decadent fuels, more plant material comes into contact with the soil surface, which increases the rate of decay of the material. This increase in decay allows the incorporation of organic matter into the soil which increases the nutrients available to the plant, as well as increasing the water-holding capacity of the soil. All of these factors combine to increase forage production of a site. Short-term impacts from prescribed burning may occur; however, the effects are not expected to decrease the ability of permittees to effectively manage their allotments.

Fire was once an integral function of the majority of ecosystems in northeast Oregon and the vegetation of the Blue Mountains is highly adapted to periodic fire in forest, shrubland, and grassland ecosystems. Following implementation of the proposed actions, the predominant vegetation would recover quickly after prescribed burning, and rest periods from grazing are not anticipated in most pastures, therefore impacts to permittee operations are not anticipated. Prescribed burning is proposed in areas predominately composed of elk sedge and pine grass. These fire-tolerant herbaceous species are less desirable forage by livestock, thus the impacts of prescribed burning are unlikely to affect the necessary forage base to manage these allotments for livestock use.

Coordination with a district range specialist and permittees is required prior to prescribed burning activities (see Camp Lick FEA Appendix C – Project Design Criteria). Grazing management adjustments would be developed in coordination with the allotment permittee and incorporated into the annual grazing strategies. After prescribed burning is initiated, grazing management practices would be implemented to achieve desired use levels. These practices may include deferment or electric fencing, adjustment of livestock placement in pastures, and use of salt blocks or other management practices that would promote livestock use of pastures away from treatment areas. The proposed actions are consistent with the Malheur National Forest Post-Fire Interim Grazing Guidelines (USDA Forest Service 2003) which states that vegetation types such as elk sedge and pine grass require little recovery time after a low intensity burn.

Generally, spring burns have the fewest undesirable effects to forage species, perhaps due to higher soil moistures. However, bluebunch wheatgrass has a higher mortality if burned in the spring, compared with fall burning. In the elk sedge/pinegrass communities, low to moderate severity fire may result in rapid rhizome extension and greater palatability to livestock and wild ungulates.

Burning impacts on plant species in this planning area would vary in response due to a variety of conditions such as weather, season of burning, plant morphology, current plant condition and vigor, accumulated litter, soil moisture, and fire intensity. Fire intensity likely has the most influence on individual plants and forage production. The wide variation in burning intensity across treatment units (unburned to light to moderate) would create wide variability in results and recovery. Low-intensity fires would have low plant mortality and stimulate plant vigor. Plants with increased vigor produce more leaf matter and set more seed, resulting in an increase in forage production. Increased plant mortality is expected with heavier fuel loading. In these areas, re-seeding with native plant seed mixes would be necessary.

Low-intensity burning is expected where fuel loads are mostly herbaceous, and where there is little woody material (less than 1 ton per acre), such as in open grassland with only light shrub cover. When prescriptions call for broadcast burning of scattered fuels, the burning impacts would be widespread over the unit, with severe burning intensity creating cover voids, but with surviving plants interspersed throughout the unit. Bunched slash and piles burned at landings often kill understory species in the immediate vicinity and re-seeding could be necessary.

Long-term impacts of prescribed burning are anticipated to be positive in terms of moving treatment units towards historical conditions, improving watershed conditions, and increasing the production of rangeland resources. Recovery of vigor and production in the herbaceous species is quickest for pine grass and elk sedge. For low-intensity fires, dry site bluebunch wheatgrass and Idaho fescue would be stimulated by the removal of decadent plant material and the flush of nutrients from burning. However, long-term maintenance of historical conditions may require follow-up treatments to ensure shrub cover does not reach pre-treatment levels or dominate the understory in the future. Historically, these sites did not have a heavy shrub component, since fire-return intervals thinned the shrub cover intermittently.

Prescribed burning has an indirect effect of promoting better livestock distribution due to improved quality and distribution of forage. Indirect effects related to management of grazing permits include loss of control of livestock if gates are left open or fences are rendered ineffective due to fire activity. The loss of control of livestock due to these indirect effects increases the complexity of the management strategies and could result in decreased management effectiveness.

Unplanned ignitions throughout the planning area would be managed with the involvement of the range program as well as permittees.

### *Road Activities*

During project implementation, the increase in road use associated with implementation of project activities may detrimentally affect cattle distribution. The extent of this effect is unpredictable and is based on several fluctuating factors, such as the timing of the road activities in correlation with livestock management practices. Effects include, but are not limited to, potential fence damage or removal during implementation, potential gates left open, increased traffic hindering the cattle from traveling back and forth across roads. Detrimental impacts are expected to only last until the project is complete.

Access too much of the planning area by permittees with livestock grazing permits is by horseback. As such, decreasing road densities is unlikely to negatively affect livestock management.

Permittees with term grazing permits are allowed limited off-road use in order to administer their grazing permits pursuant to Title 36 Code of Federal Regulations 261.5. In addition, any existing closed road that is needed for access for the administration of grazing permits within Malheur National Forest lands are available for use even if closed for use by the general public. As such, the decrease of open roads as proposed by the proposed action would likely not affect livestock management activities, including access to and management of water developments, amount of forage availability, and acreage available for livestock grazing. Road decommissioning and relocation are expected to increase forage in the road bed but may decrease access by the permittees for other management practices.

### *Interpretive Sign Installation*

No direct or indirect effects are expected to occur to the range resource as a result of interpretive sign installation because it would not impact forage production or cattle distribution.

### *Range Fence Construction*

Construction of the two proposed fences would improve allotment management in the affected areas. Fences that are constructed and maintained on Forest land use the guidance of technical reference PNW-GTR-250 Specifications for Structural Range Improvements as well as the expertise of technical specialist to ensure that they have limited effects to the resources and the wildlife that use it.

### *Cumulative Effects*

The proposed action would move the planning area towards a healthier, resilient, diverse, and sustainable ecosystem. The proposed action would increase the amount of available forage for livestock as well as increase the amount of open area accessible by livestock. This increase in forage, space, and functioning upland water developments would lead to an overall increase in the distribution of livestock and decrease the concentrations of use by livestock and wildlife. Combining more available forage with the current trend of increased conditions of vegetation in the planning area may increase the options for forest land management to continue toward increased multiple use, as described in the Forest Service's mission.

### *Fire Suppression*

Fire suppression increases canopy cover and thus decreases available forage on the forest floor, creating a negative effect on range management. Alternatively, uncontrolled wildland fire would have short-term negative effects to range management since the intensity can often decrease microbial activity in the soil, harm the root structures of desired native plants, and offer increased chances of non-native invasive plant infestations due to the increase of bare soil.

### *Grazing*

Grazing has a beneficial effect to rangeland plant species. Grass has evolved with grazing and is physiologically designed to respond positively to the effects of properly-managed grazing. Adaptive management allows permittees to graze after seed production has been completed as a way to increase the abundance of the species, since grazing helps incorporate seeds into the soil through micro sites that are created by livestock hoofs. Grass can be grazed prior to seed emergence and, through the natural process of nutrient cycling, can be fertilized prior to seed production—the time in a plants maturity which take the most nutrients to complete.

### *Firewood Cutting*

Firewood cutting is a common activity that has a negative impact on range management. Fences are often cut, broken, or destroyed by people accessing trees. This allows livestock to access areas that have already been grazed, are at a higher risk for impact, or are being protected for another resource.

### *Aquatic Restoration*

Potential upland water developments implemented under the Aquatic Restoration Decision would increase the total number of upland water sources, which would positively affect cattle distribution

and decrease the concentration of livestock in the riparian areas. Approximately 21 new water developments throughout the planning area may be developed.

## **Compliance with Forest Plan and Other Relevant Laws, Regulations, Policies and Plans**

Alternative 2 is consistent with the following Malheur Forest Plan Forest-wide standards:

- Forest-wide standard 82: Manage residues to facilitate the use of forage by domestic livestock (USDA Forest Service 1990, page IV-34). Alternative 2 would decrease canopy cover and increase the number of acres available for grazing.
- Forest-wide standard 85: Design improvements to protect tree regeneration and/or to distribute livestock use (USDA Forest Service 1990, page IV-35). The proposed range fence construction would help distribute livestock use.
- Forest-wide standard 88: Design and implement structural and nonstructural range improvements to maintain productivity and range condition in addition to benefiting both wildlife and livestock. Locate range structural and nonstructural improvements to encourage livestock movement away from riparian areas (USDA Forest Service 1990, page IV-35). Alternative 2 would decrease the canopy cover, improving the forage base and increasing the acres available for grazing. The proposed range fence construction would encourage livestock movement away from riparian areas.

Range permittees were contacted during collaboration and the scoping period to solicit and incorporate comments on project activities.

## **Other Relevant Mandatory Disclosures**

There are no irreversible and irretrievable commitments of resources that may result from the proposed action or other action alternatives with respect to rangeland management.



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